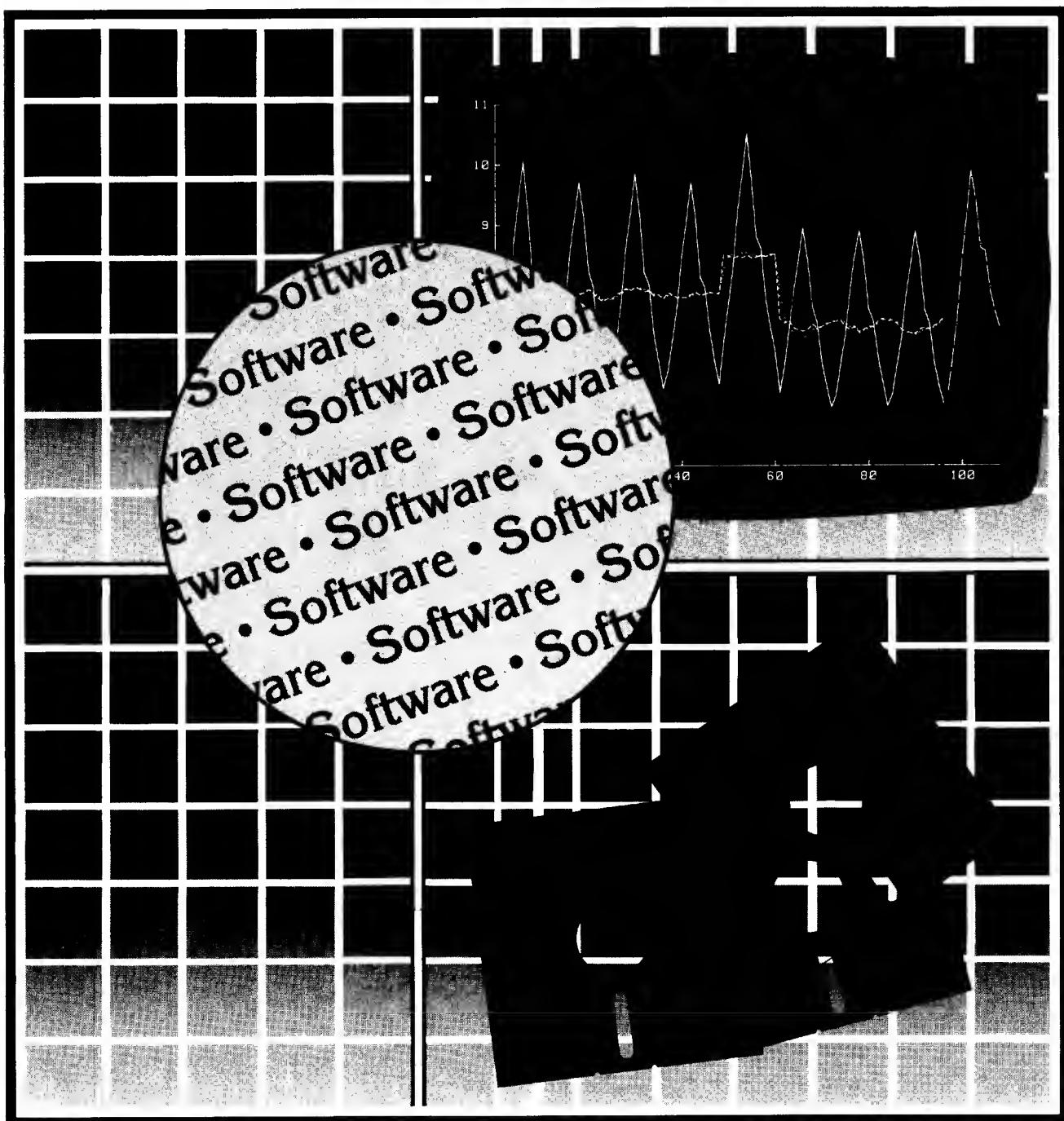


# BASIC 3.0

## Documentation Guide and Master Index



# **BASIC 3.0**

## **Documentation Guide**

## **and Master Index**

*for the HP 9000 Series 200 Computers*

Manual Part No. 98613-90070

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Hewlett-Packard Company  
3404 East Harmony Road, Fort Collins, Colorado 80525

## Printing History

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## BASIC Documentation Guide

As with most products, learning how to use the manuals properly will help you get the most use from the product. In order to use the manuals most effectively, you should know both the objective and content of each manual.

This section describes the overall organization of the manual set and gives a brief description of each of the major manuals. The guide then describes the purpose of and notation used in the master index. An example of using the manuals and index is also provided. At the end of the manual, we invite you to make comments about the manuals on the enclosed card.

## Structure of the Documentation

The information in the Series 200 BASIC documentation is divided into three general categories, according to the function you are going to perform with the computer.

- installation and operating instructions
- programming techniques
- language reference information

The following paragraphs further explain the objectives and contents of each of the major manuals in the set. You are encouraged to pick up the manual and leaf through it as you read its description. Scanning the Table of Contents of each book will also help you get a quick, but broad, overview of the manual.

### The Installation and Operating Guides

The *Installation Guides* show you how to get your computer "up and running". There is one *Installation Guide* for each of the Series 200 computers.

The *BASIC User's Guide* describes loading the BASIC operating system, configuring BASIC, and introduces you to several functions. If you are unfamiliar with HP BASIC, you should read this guide first.

### The Techniques Manuals

The techniques manuals *help you learn the HP Series 200 BASIC language* by providing task-oriented example programs and corresponding explanations. The techniques manuals include the following:

- *BASIC Programming Techniques* describes writing, editing, storing, running, and debugging BASIC programs. The manual also describes such programming topics as string and math operations, using the real-time clock, and communicating with the operator.

You may want to peruse individual chapters of interest in the main part of the manual. The Appendix section contains Error Messages and ASCII tables, and the Index section provides an index to the topics in this manual.

- *BASIC Interfacing Techniques* describes how to communicate with external devices. Both general and interface-specific techniques are described in the manual.

Read Chapter 1, "Manual Overview," to see this manual's objectives and contents. This chapter also describes the organization of information in the manual and briefly describes each chapter. You may want to scan chapters of interest in the main part of the manual. The "Useful Tables" contains information relevant to interfacing, and the Index provides an index to the topics in this manual.

- *BASIC Graphics Techniques* describes using the graphics capabilities of Series 200 computers. Plotting on the CRT and on external graphics devices are fully described in this manual, as well as using external graphics input devices.

Chapter 1, "Introduction to Graphics," describes the objectives of the manual and assumptions made about your knowledge of BASIC programming. You may want to scan the individual chapters of the manual as your interest dictates. An index is also provided by this manual.

## The Reference Manuals

The reference manuals are designed to *aid you while coding programs* by providing information about each keyword. The reference information consists of the following two manuals:

- The *BASIC Language Reference* provides a complete "dictionary" of precise descriptions of every keyword in the Series 200 BASIC language. Drawings are used to graphically show the proper syntax of each keyword, and any parameters are described in an accompanying table. The semantics section describes the resultant action of different keyword syntaxes.

The "Keyword Dictionary" section is the main part of this manual, providing the following four sections: 1) "Language History," which provides valuable information about how and when the language has been revised and updated; 2) "Using the Keyword Dictionary," which describes what information is provided by the dictionary and explains how to use it; and finally 3) the actual dictionary entries. You should read the first two of these sections before attempting to use the rest of the manual.

The "Glossary" provides concise definitions of technical terms used throughout the manual set, which you can refer to as you encounter unfamiliar terms. The "Interface Registers" section contains listings of all status and control registers of I/O paths, CRT, keyboard, and optional interfaces. The contents of the "Useful Tables" and "Error Messages" sections are self-evident. The "Keyword Summary" section provides a complete list of keywords in the Series 200 BASIC language, grouped according to the function that it performs.

- The *BASIC Condensed Reference* also provides a listing of all keywords and gives example statements for each. However, it only gives brief descriptions of the keywords, and it does not contain any syntax drawings or semantic information. Therefore, you will probably use it to check the spelling of a keyword or to see the parameters and corresponding order.

The main sections of this manual are as follows: 1) brief explanations of system versions, data types, expression evaluation, graphics mapping and color model, and glossary; 2) alphabetized keyword listing with brief descriptions of each keyword; 3) summary of interface registers; and 4) useful tables, including key codes, error messages, and ASCII characters.

## Structure of the Master Index

The master index provided by this guide references topics in the major manuals of the Series 200 BASIC documentation. This index was created by merging all of the information in each individual manual's index into one large index.

### Referencing Scheme

Since the Master Index references topics in more than one manual, it must indicate which manual each entry references. To meet this requirement, each manual in the set has been designated by a mnemonic:

BPT: *BASIC Programming Techniques*

BIT: *BASIC Interfacing Techniques*

GPT: *BASIC Graphics Programming Techniques*

BUG: *BASIC User's Guide*

The following illustration shows an example of the format used in the index.

ASCII	
Character Codes.....	<b>BPT:394</b>
Character Set .....	<b>BPT:140</b>
Characters, finding	<b>BUG:58,70,82,141</b>
Data representation ..	<b>BIT:12,138,152</b>
Files .....	<b>BPT:206</b>
	<b>BUG:105,152</b>
.	.
.	.

Note the following key features of the index format:

- A mnemonic is always given, in bold font and followed by a colon, before any page number(s) are shown.
- Page numbers that follow the mnemonic are found in that manual (i.e., every page number is not preceded by the mnemonic).
- If there are references to more than one manual given for a single topic, each mnemonic and pages therein begin on a new line.
- A legend of mnemonic definitions is provided on the bottom of each page.

## Using the Manuals

A preceding section described the objective and general contents of each type of manual in the set. If you are not familiar with the types of manuals and purposes thereof, please review that section.

Now that you know what each manual is to do for you and what information it contains, you are ready to begin using them.

### An Algorithm for Using the Manuals

Although simplistic, here is a “two-step” procedure that you will probably take while using your computer to solve your programming problem:

1. Develop an algorithm for solving your problem, breaking it up into specific, manageable tasks. Work with one task at a time, expanding and refining each by using the following steps:
  - a. Examine the mechanics of performing the task. Read the relevant discussion(s) in the appropriate techniques manual(s). Keep in mind that these manuals will probably only describe one or two approaches to performing elemental tasks. You may be able to expand or modify one of the fundamental algorithms presented to suit your particular needs. You may need to consult an advanced or specialized programming text to see how to design more complex, application-specific algorithms and programs.
  - b. Determine what hardware the task will require, if any, and install it according to the appropriate installation or operating manual.
  - c. Code your algorithm into a BASIC-language program. Consult the reference manual(s) to answer any questions about specific keywords.
  - d. Test and debug your algorithm, which may require using both techniques and reference manuals.
2. Repeat step 1, breaking each task up into finer detail, until you have the solution.

## An Example

Let's look at a simple, hypothetical scenario. Suppose that you unpacked all manuals and were told that this is the first one to read. After reading about the overall scheme of the documentation, you turn to the installation manual to get your computer "up and running."

Once your computer hardware is set up, turn to Chapter 1 of *BASIC Programming Techniques*, "Getting Started," to learn more about how to use the computer and BASIC language. When you feel comfortable using your computer to perform some elementary operations, suppose that you want to learn how to use mass storage files. If you were to look in the index under the topics "Mass storage" or "Files" you would find several references to topics on using files.

File:	
Accessing .....	<b>BIT:152</b>
	<b>BPT:222</b>
ASCII.....	<b>BIT:154,157</b>
	<b>BPT:206</b>
BDAT .....	<b>BIT:153,164</b>
	<b>BPT:203</b>
Copying .....	<b>BPT:38,244</b>
	<b>BUG:106,149</b>
.	
.	
.	
MASS STORAGE.....	<b>BPT:198</b>
As an I/O resource .....	<b>BIT:21</b>
File access .....	<b>BIT:152,157,164</b>
Non-disc. ....	<b>BPT:220</b>
MASS STORAGE IS statement. ....	
	<b>BUG:107,113,115,149</b>
	<b>BPT:214</b>
.	
.	
.	

BPT: *BASIC Programming Techniques*

BIT: *BASIC Interfacing Techniques*

GPT: *BASIC Graphics Programming Techniques*

BUG: *BASIC User's Guide*

The references to the *BASIC Programming Techniques* manual (BPT) pertain to Chapter 7: Data Storage and Retrieval. (If you were already familiar with this techniques manual, you know that the tabbed section called "Data Storage" contains the desired information.) The chapter contains a tutorial section, appropriately called "Mass Storage Tutorial," that gives some background on what mass storage is and how it is implemented on HP Series 200 computers. The chapter also contains a section called "Mass Storage Techniques" that presents some file-access programming techniques.

The references to the *BASIC Interfacing Techniques* manual (BIT) pertain to Chapter 10: I/O Path Attributes. The discussions give other examples of accessing files with an "interfacing" perspective.

The references to the *BASIC User's Guide* (BUG) primarily pertain to Chapter 6: Talking to Peripherals With BASIC.

After reading as much of these discussions as you feel necessary, you begin writing programs. As you code algorithms into the computer's BASIC language, you consult either the *BASIC Language Reference* or the *BASIC Condensed Reference* to answer questions about certain keywords; the one you consult depends on how much information you need.

Learning additional programming skills involves the same steps as learning the one presented here. First, consult the appropriate techniques manual to see if your task is described. If so, read the text, trying any examples given. Then, as you begin to write BASIC code for the algorithm that you develop, consult the appropriate reference manual(s).

## Do the Manuals Work?

As mentioned at the beginning of this manual, the Series 200 BASIC documentation has been designed to help you in learning to use the system effectively. This survey has been included to help find out how fully you think we have accomplished this goal.

After using the manuals for a while, please take a few minutes to fill out the survey. Then tear it out and send it to us. We appreciate any and all comments, complaints, or commendations.

# Subject Index

## a

ABS ..... BPT:82  
 Accessing Directories ..... BPT:246  
 Accessing Files ..... BPT:222  
 Accessing Mass Storage ..... BPT:210  
 Accuracy ..... BPT:76  
 Accuracy of the Clock ..... BPT:275  
 ACS ..... BPT:82  
 Additive color system ..... GPT:102  
 ALLOCATE ..... BPT:74, 120  
 ALPHA Key ..... BPT:331  
 ALPHA key, HP 98203B ..... BUG:69,116  
 ALPHA OFF ..... BPT:331  
 ALPHA OFF statement ..... BUG:116,118  
 ALPHA ON ..... BPT:331  
 Alpha/Dump Alpha key, HP 46020A ..... BUG:54,116  
 Angle Functions ..... BPT:83  
 Animation, color map ..... GPT:96  
 Anisotropic ..... GPT:6  
 Anisotropic scaling ..... GPT:6  
 ANY C key, HP 98203A ..... BUG:82,141  
 ANY CHAR Key ..... BPT:40, 144  
 ANY CHAR key, HP 98203B ..... BUG:70,141  
 Any char softkey, HP 46020A ..... BUG:58,141  
 AP2.0 ..... BPT:379  
 Appending Program Lines ..... BPT:30  
 AREA COLOR ..... GPT:52, 82  
 AREA INTENSITY ..... GPT:52, 82  
 AREA PEN ..... GPT:52, 81  
 Arithmetic hierarchy ..... BUG:93,141  
 Arrays ..... BPT:74  
 Copying ..... BPT:92  
 Declaring ..... BPT:74  
 Dimensioning ..... BPT:85  
 Indexing ..... BPT:321  
 Operations ..... BPT:85  
 Operators ..... BPT:96  
 Reordering ..... BPT:99  
 Sorting ..... BPT:100  
 String ..... BPT:120

Arrow keys, HP 46020A ..... BUG:48  
 Arrow keys, HP 98203A ..... BUG:78  
 Arrow keys, HP 98203B ..... BUG:65  
 ASCII  
 Character Codes ..... BPT:394  
 Character Set ..... BPT:140  
 Characters, finding ..... BUG:58,70,82,141  
 Data representation ..... BIT:12,138,152  
 Files ..... BPT:206  
 ..... BUG:105, 152  
 ASN ..... BPT:82  
 Aspect ratio ..... GPT:19  
 ASSIGN  
 Determining outcome of ..... BIT:151  
 I/O path names ..... BIT:26  
 Specifying attributes ..... BIT:139  
 ASSIGN @ ..... BPT:223  
 ATN ..... BPT:82  
 Attributes  
 Assigning ..... BIT:139  
 BYTE ..... BIT:141  
 CONVERT ..... BIT:146  
 EOL ..... BIT:148  
 FORMAT OFF ..... BIT:139, 33  
 FORMAT ON ..... BIT:137, 33  
 PARITY ..... BIT:149  
 RETURN ..... BIT:151  
 WORD ..... BIT:142  
 Auto Line Numbering ..... BPT:7  
 Auto shutter, 3½-inch disc ..... BUG:17  
 AUTOST ..... BPT:35  
 Autostart on SRM ..... BPT:36  
 Autostart program ..... BPT:35  
 ..... BUG:134,136,142  
 AXES ..... BPT:336  
 ..... GPT:10, 11, 28, 29, 30, 33

# b

BACK SPACE key, HP 98203A . . . . . BUG:78  
 BACK SPACE key, HP 98203B . . . . . BUG:65  
 Backgrounds. . . . . GPT:93  
 Backplane. . . . . BIT:6  
 Backspace key, HP 46020A . . . . . BUG:48  
 BASE . . . . . BPT:82, 91  
 Base Conversion . . . . . BPT:138  
 BASIC 2.0. . . . . BPT:379  
 BASIC 2.0/2.1. . . . . BUG:137  
 BASIC 3.0 documentation. . . . . BUG:155  
 BASIC 3.0 Drivers Disc  
     . . . . . BUG:30,31,32,105,127,128,129,132,133  
 BASIC 3.0 Language Extensions Disc  
     . . . . . BUG:30,31,127,128,130,133  
 BASIC 3.0 Manual Examples Disc  
     . . . . . BUG:111,113,117,123  
 BASIC 3.0 System Disc  
     BUG:25,26,27,28,29,30,127,129,132,136,153  
 BASIC description . . . . . BUG:1,6  
 BASIC discs. . . . . BUG:13  
 BASIC programming. . . . . BUG:87,151  
 BASIC, booting. . . . . BUG:7,10,25,143  
 BASIC, loading . . . . . BUG:5  
 BCD  
     BIN file. . . . . BUG:129  
     Binary mode . . . . . BIT:405, 416  
     Configuration. . . . . BIT:408  
     Data representations. . . . . BIT:402  
     ENABLE INTR . . . . . BIT:427  
     ENTER . . . . . BIT:403, 413  
     Handshakes . . . . . BIT:410  
     Installation note . . . . . BIT:401  
     Interface description . . . . . BIT:402  
     Interrupts . . . . . BIT:427  
     ON INTR . . . . . BIT:427  
     Optional format. . . . . BIT:404, 420  
     OUTPUT . . . . . BIT:407, 423  
     Register summary . . . . . BIT:428  
     Reset. . . . . BIT:412  
     Service routines. . . . . BIT:427  
     Standard format . . . . . BIT:403, 414  
     Timeouts . . . . . BIT:425  
 BDAT Files . . . . . BPT:203  
     BUG:106  
     Reading. . . . . BPT:225  
     Writing. . . . . BPT:225  
 Benchmarking . . . . . BPT:319

BIN files. . . . . BUG:30,105,127,128,129,142  
 BINAND . . . . . BPT:82  
 Binary Tree. . . . . BPT:186  
 BINCMP . . . . . BPT:82  
 BINEOR . . . . . BPT:82  
 BINIOR . . . . . BPT:82  
 BINs. . . . . BPT:37  
     Deleting from Memory. . . . . BPT:43  
     Loading. . . . . BPT:37  
     Scratching. . . . . BPT:37, 43  
 BIT. . . . . BPT:82  
 Bits and bytes. . . . . BIT:11  
 Bits/pixel . . . . . GPT:39  
 Blank Lines. . . . . BPT:283  
 Boolean Arrays. . . . . BPT:98  
 Boot ROM . . . . . BUG:7,143  
 Boot ROMs, earlier. . . . . BUG:7,8,135,143  
 Boot ROMs, later. . . . . BUG:7,135,143  
 Booting BASIC. . . . . BUG:7,10,25,143  
 Boundary Conditions. . . . . BPT:300  
 Boxing the Screen . . . . . BPT:333  
 Break  
     Command . . . . . BIT:141  
     Datacomm . . . . . BIT:272  
     Serial. . . . . BIT:331  
 Break key, HP 46020A . . . . . BUG:52  
 BUBBLE. . . . . BPT:212  
 BUBBLE BIN file . . . . . BUG:129  
 Bubble Memory . . . . . BPT:220  
 Buffers  
     Assigning I/O path names. . . . . BIT:169  
     Creating . . . . . BIT:169  
     Description. . . . . BIT:168  
     Pointers . . . . . BIT:170, 193  
     Registers. . . . . BIT:195  
 Bugs . . . . . BPT:299, 307  
 Bus . . . . . BIT:6  
 Bus sequences. . . . . BIT:202  
 Business colors. . . . . GPT:84  
 BYTE attribute. . . . . BIT:141

# C

C I/O key, HP 98203A . . . . .	BUG:84	GPT:71	
Calculating . . . . .	BUG:125	BPT:223	
CALL . . . . .	BPT:169	BPT:314	
	BIT:162	BPT:17	
Calling a Subprogram . . . . .	BPT:169	BIT:97	
Caps key, HP 46020A . . . . .	BUG:45	CLR I/O key, HP 98203B . . . . .	BUG:73
CAPS key, HP 98203A . . . . .	BUG:76	CLR L key, HP 98203A . . . . .	BUG:81
CAPS LOCK key, HP 98203B . . . . .	BUG:62	CLR LN key, HP 98203B . . . . .	BUG:68
CASE . . . . .	BPT:57	CLR S key, HP 98203A . . . . .	BUG:81
Case Conversion . . . . .	BPT:130	CLR SCR key, HP 98203B . . . . .	BUG:70
CAT statement . . . . .	BPT:27, 246	CLR T key, HP 98203A . . . . .	BUG:81
	BUG:105, 108, 118, 146	CLR TAB key, HP 98203B . . . . .	BUG:68
Catalog Header, Suppressing . . . . .	BPT:250	Clr Tab softkey, HP 46020A . . . . .	BUG:57
Cataloging the Disc . . . . .	BPT:247	CLR→END key, HP 98203B . . . . .	BUG:68
Cataloging, Skipping Files . . . . .	BPT:251	CMY color cube . . . . .	GPT:102
Ceiling of a number . . . . .	GPT:6	Code, character . . . . .	BUG:119
CHANGE . . . . .	BPT:22	COLOR . . . . .	GPT:88
Changing CRT Hz setting . . . . .	BUG:10	Color . . . . .	GPT:81
Changing program variables . . . . .	BUG:126	Blindness . . . . .	GPT:96
Chapter preview . . . . .	BIT:2	Echoes . . . . .	GPT:77
Character		Gamuts . . . . .	GPT:106
Code . . . . .	BUG:119	Graphics . . . . .	BPT:347
Height . . . . .	BPT:337	Lines . . . . .	BPT:349
Width . . . . .	BPT:337	Map . . . . .	GPT:85
Character Set, Extended . . . . .	BPT:143	Map animation . . . . .	GPT:96
Character Set, Highlights . . . . .	BPT:143	Spaces . . . . .	GPT:102
Character-cell . . . . .	GPT:18	Temperature . . . . .	GPT:101
Choosing colors . . . . .	GPT:100	Colors	
CHR\$ function . . . . .	BPT:127	Business . . . . .	GPT:84
	BUG:120, 121, 122, 148	Default . . . . .	GPT:84
Clear display key, HP 46020A . . . . .	BUG:51	Primary . . . . .	GPT:84
Clear line key, HP 46020A . . . . .	BUG:51	COM . . . . .	BPT:32, 120
Clearing		COM Blocks . . . . .	BPT:173
Memory . . . . .	BUG:151	Command . . . . .	BPT:6
the Computer . . . . .	BPT:43	Comments . . . . .	BPT:11, 13, 317
the CRT . . . . .	BPT:282	Common . . . . .	BPT:316
CLIP . . . . .	BPT:339, GPT:34	Common and GET . . . . .	BPT:34
CLIP OFF . . . . .	GPT:29, 34	Comparing REAL Numbers . . . . .	BPT:301
CLIP ON . . . . .	GPT:29, 34	Comparision Operators . . . . .	BPT:79
Clipping . . . . .	BPT:338	Compatibility with 9845 graphics . . . . .	GPT:129
	GPT:29, 34, 8	Complementary writing . . . . .	GPT:94
Clock . . . . .	BPT:265	Computer backplane . . . . .	BIT:6
Accuracy . . . . .	BPT:275	Computer installation . . . . .	BUG:1
Events . . . . .	BPT:276	Computer resource . . . . .	BIT:5
Setting . . . . .	BPT:268, 270	Computing range . . . . .	BUG:95
CLOCK BIN file . . . . .	BUG:130	Concatenation, Strings . . . . .	BPT:121

BPT: *BASIC Programming Techniques*BIT: *BASIC Interfacing Techniques*GPT: *BASIC Graphics Programming Techniques*BUG: *BASIC User's Guide*

Conditional	
Branching	BPT:53
Execution	BPT:51
Configuration, CRT	BUG:148
Configuring a System	BPT:37
Configuring BASIC	BUG:134,153
Constants	BPT:325
CONT key, HP 98203A	BUG:83
Context Switching	BPT:176
CONTINUE	BPT:47
CONTINUE key, HP 98203B	BUG:73
Continue softkey, HP 46020A	BUG:56
Continuous degrees of freedom	GPT:73
Contour plotting	GPT:116
CONTROL	BPT:283
Control Characters	BPT:257
Displaying	BPT:140
CONTROL statement	BIT:75
Control-C key	BUG:10
Controlling pen force	GPT:67
Controlling pen speed	GPT:67
Conversions	
BY INDEX	BIT:146
BY PAIRS	BIT:146
Using string variable	BIT:385
CONVERT Attribute	BIT:146
COPY statement	BPT:38, 244 BUG:35,36,106,107,145,149
Copying	
Arrays	BPT:92
Discs	BUG:35,36,145
Files	BPT:38, 244 BUG:106,149
Program Segments	BPT:21
Volumes	BPT:244
COPYLINES	BPT:21
COS	BPT:82
CREATE ASCII	BPT:246
CREATE BDAT	BPT:225
Cross References	BPT:26
CRT	BPT:82, 256
Bit-mapped	BIT:98,102,105,106
Clearing	BPT:282
Configuration	BUG:144,148
Control characters	BIT:102
Description	BIT:97
Disabling the cursor	BIT:112
DISP line	BIT:111, 98
Display functions mode	BIT:103
Enhancement characters	BIT:102,446
ENTER	BIT:109
Hz setting	BUG:10,11,144
Insert mode	BIT:112
Output	BIT:98
Register summary	BIT:115
Screen addresses	BIT:106
Screen width	BIT:106
Scrolling	BIT:107
Size	BPT:331, 341
Softkey labels	BIT:113
CRTA BIN file	BUG:129,132
CRTB BIN file	BUG:129,132
CS80	BPT:212
CS80 BIN file	BUG:31,32,129,132
CSIZE	BPT:337 GPT:16, 19, 23
CSUBs	BPT:379, 380
CSUM	BPT:116
CTRL key, HP 46020A	BUG:47
CTRL key, HP 98203A	BUG:77
CTRL key, HP 98203B	BUG:63
Current relative location	GPT:47

# d

DATA	BPT:92, 194
Data communications basics	BIT:257
Data driven plotting	GPT:43
Data Files	BPT:318
Structure	BPT:203
Data Input	BPT:194
Data Pointer, Moving	BPT:197
Data representations	
ASCII characters	BIT:12
Design criteria	BIT:152
FORMAT OFF	BIT:139
FORMAT ON	BIT:138
In general	BIT:11
Numbers	BIT:12
Real numbers	BIT:15
Signed integers	BIT:13
Summary	BIT:155
Data Retrieval	BPT:193
Data Storage	BPT:193, 315, 316
Data Structure	BPT:185

Data Type Conversion	BPT:74	Default printer	BUG:150
Data Types, Numeric	BPT:73	Defined Records	BPT:225
Datacomm		Defining a Viewport	GPT:13
Async diagram	BIT:258	Defining Softkeys	BPT:39
Async options	BIT:267	Degrees	BPT:83
Async protocol	BIT:258	Degrees of freedom	GPT:72
Block check	BIT:259	DEL C key, HP 98203A	BUG:81
Break	BIT:272	DEL CHR key, HP 98203B	BUG:68
Cable options	BIT:306	DEL Command	BPT:10
Character frame	BIT:258,272	DEL L key, HP 98203A	BUG:80
Connections	BIT:264	DEL LN key, HP 98203B	BUG:67
Control blocks	BIT:260	Delete char key, HP 46020A	BUG:51
Data link options	BIT:273	Delete line key, HP 46020A	BUG:50
Data link protocol	BIT:259	Deleting	
Data messages	BIT:262	BIN files	BUG:142
Default settings	BIT:265	Lines	BPT:10
Device identifier	BIT:259	Subprograms	BPT:23, 181, 182
Error recovery	BIT:292	DELSUB	BPT:23, 181
Example programs	BIT:287,294	Designing displays	GPT:95
Group identifier	BIT:259	Destination	BIT:6
Handshakes	BIT:270,274	Destination msus	BUG:35
Interrupt mask	BIT:279	DET	BPT:82, 111
Interrupts	BIT:278	Determinant of a Matrix	BPT:111
Modems	BIT:275	Device Selector	BUG:101, 108
Normal mode	BIT:259	BPT:212, 253, 256	
Overview	BIT:263	Description	BIT:23
Parity	BIT:258,272	HP-IB	BIT:199, 24
Protocol selection	BIT:266	Primary address	BIT:199, 24
Register summary	BIT:310	Device Type	BPT:211, BUG:100
Reset	BIT:266	DIGITIZE	BPT:355
Service routines	BIT:281	GPT:74	
Start bit	BIT:258, 272	Digitizing	BPT:355
Stop bit	BIT:272	DIM	BPT:120, 74
Stop bits	BIT:258	Dimension Table	BPT:315
Time gap	BIT:258, 272	Dimensioning an Array	BPT:85
Timeouts	BIT:269	Directing data flow	BIT:21
Transparent mode	BIT:259	Directories, Accessing	BPT:246
DATE	BPT:82, 266	Directories, Reading	BPT:246
DATE\$	BPT:265	Directory listing	BUG:146, 104, 105
DCOMM BIN file	BUG:129	Disabling Events	BPT:69, 71
Deactivating Events	BPT:69	Disc	BPT:0
Debugging	BPT:307	Cataloging	BPT:247
Declaring Arrays	BPT:74	Copying	BPT:244
Declaring Variables	BPT:74	Directory	BPT:201
DEF	BPT:168	Initialization	BPT:208
Default colors	GPT:84	Interleave	BPT:200
Default Dimensioning	BPT:119	Labels	BPT:209
Default msus	BUG:149	Structure	BPT:198
Default non-color map values	GPT:82		

DISC BIN file ..... **BUG:31,32,129,132**  
 Disc Drives ..... **BUG:100,101,102,103,104**  
   External ..... **BPT:214**  
   Internal ..... **BPT:214**  
 Discs  
   flexible, 3½-inch ..... **BUG:14**  
   flexible, 5¼-inch ..... **BUG:19**  
   flexible, backing up ..... **BUG:14,19**  
   flexible, BASIC ..... **BUG:13**  
   flexible, copying with one drive ..... **BUG:36**  
   flexible, copying with two drives ..... **BUG:35**  
   flexible, guard, 3½-inch ..... **BUG:14,17**  
   flexible, handling/use, 3½-inch ..... **BUG:14**  
   flexible, handling/use, 5¼-inch ..... **BUG:19**  
   flexible, initializing ..... **BUG:33,145**  
   flexible, inserting/removing 3½-inch  
     ..... **BUG:17,18**  
   flexible, inserting/removing 5¼-inch  
     ..... **BUG:21**  
   flexible, part numbers ..... **BUG:33**  
   flexible, storing ..... **BUG:37**  
   flexible, temperature specs ..... **BUG:15,20**  
   flexible, write-protecting ..... **BUG:23**  
     ..... **24,146,147**  
 DISPLAY FCTNS key, HP 98203B ..... **BUG:69**  
 Display Fctns softkey, HP 46020A ..... **BUG:58**  
 Display  
   Configuration ..... **BUG:144**  
   Enhancements ..... **BUG:119,144,148**  
   Keyboard area ..... **BUG:40,41**  
   Line ..... **BUG:40,41**  
   Mechanical drawing ..... **BUG:123**  
   Message/results line ..... **BUG:40,41**  
   Organization ..... **BUG:40**  
   Shuttle ..... **BUG:124**  
   Softkey labels ..... **BUG:40,42**  
 Displaying Control Characters ..... **BPT:140**  
 Displays ..... **BPT:282**  
 Dithering ..... **GPT:46**  
 Dithering color ..... **GPT:89**  
 Dithering, optimizing ..... **GPT:91**  
 Dominant pen mode ..... **GPT:66**  
 DOT ..... **BPT:82, 106**  
 Double Subscripted Substrings ..... **BPT:123**  
 DRAW ..... **BPT:332, GPT:50**

Drawing ..... **BPT:332**  
   Arcs ..... **GPT:123**  
   Axes ..... **BPT:336**  
   Grids ..... **BPT:336**  
   in Color ..... **BPT:349**  
   Lines ..... **GPT:4**  
   Modes ..... **GPT:35**  
   Polygons ..... **GPT:52**  
 Driver BIN files ..... **BUG:129,133**  
 Drivers ..... **BUG:30**  
 DROUND ..... **BPT:81, 82, 84**  
 DUMP ALPHA key, HP 98203B ..... **BUG:70**  
 DUMP ALPHA statement ..... **BUG:112,113,150**  
 DUMP DEVICE IS ..... **BPT:344**  
     ..... **GPT:62, 63**  
     ..... **BUG:112,113,150**  
 DUMP GRAPHICS ..... **GPT:62, 63**  
     ..... **BUG:112,113,150**  
 DUMP GRAPHICS key, HP 98203B ..... **BUG:70**  
     ..... **GPT:62**  
 Dumping raster images ..... **BUG:112**  
 Dumping to a printer ..... **BPT:82, 138**  
 DVAL ..... **BPT:82, 138**  
 DVAL\$ ..... **BPT:138**  
 Dyadic Operators ..... **BPT:79**

## e

Earlier boot ROMs ..... **BUG:7,8,135,143**  
 EDGE ..... **GPT:50, 56**  
 Edit ..... **BPT:7**  
 EDIT KEY ..... **BPT:39**  
 EDIT key, HP 98203B ..... **BUG:66, 69**  
 Edit Mode, Exiting ..... **BPT:14**  
 EDIT statement  
   ..... **BUG:48,50,63,65,77,78,80,87,89,124,125,151**  
 Editing  
   Programs ..... **BUG:151,89**  
   Softkeys ..... **BPT:39**  
   Subprograms ..... **BPT:182**  
 Editor ..... **BPT:7**  
 Efficiency of programs ..... **GPT:128**

ENABLE INTR	
BCD	BIT:427
Datacomm	BIT:279
General	BIT:93
GPIO	BIT:386
HP-IB	BIT:207
Enabling Events	BPT:66 BIT:92
END	BPT:46
With datacomm interface	BIT:41, 54
With free-field OUTPUT	BIT:40
With HP-IB	BIT:53
With HP-IB interface	BIT:41
With OUTPUT USING	BIT:52
END IF	BPT:54
END LOOP	BPT:64
END WHILE	BPT:62
End-of-File	BPT:240
End-Of-File Pointers	BPT:228
End-of-Record	BPT:240
Ending Functions	BPT:183
Ending Subprograms	BPT:183
Enhancement characters	BIT:104
Enhancements, display	BUG:119, 144, 148
ENTER	BPT:6, 238
BCD	BIT:403, 413
Buffers	BIT:167, 175, 185
CRT	BIT:110
Datacomm	BIT:263
Destination items	BIT:20
EOI termination	BIT:62, 70
Example statement	BIT:19
Free-field	BIT:55
From files	BIT:154
GPIO	BIT:381
HP-IB	BIT:200, 202, 217, 225
Keyboard	BIT:122
Nested images	BIT:72
Numeric data	BIT:56
Re-use	BIT:72
Repeat factors	BIT:72
Serial	BIT:328
String data	BIT:60
String variables	BIT:159, 22
Termination	BIT:62, 70
Using images	BIT:64
Enter key	BUG:11
HP 46020A	BUG:46, 49
HP 98203A	BUG:76
HP 98203B	BUG:62
Entering	
a Single Item	BPT:293
Data	BIT:55
Program Lines	BPT:8
EOF Pointers	BPT:228
EOL sequence	BIT:148, 39
EPROM	BIT:435 BPT:212
BIN file	BUG:129
Initializing	BIT:440
Media	BIT:437
Memory	BIT:436
Memory address	BIT:438
Memory card	BIT:435
Programmer card	BIT:435
Programming	BIT:441
Select code	BIT:437
Storing data	BIT:442
Storing programs	BIT:445
Erasing colors	GPT:83
ERR BIN file	BUG:30, 31, 32, 96, 130, 132
ERRL	BPT:302
ERRM\$	BPT:302
ERRN	BPT:302
Error	
Correction	BUG:26, 27, 29
Detection	GPT:69
Messages	BPT:383
Messages, keyboard	BUG:96
Numbers	BPT:302
Trapping	BPT:302
Self-test	BUG:11
Error Recovery	
Datacomm interface	BIT:292
Serial interface	BIT:330
Errors	BPT:299, 383
Operator	BPT:300
Program	BUG:97
Escape Code Sequences	BPT:258
European characters	BIT:457
Event-Initiated Branching	BPT:45, 66
Events	BPT:66
Deactivating	BPT:69
Disabling	BPT:69
Enabling	BPT:66
EXEC	BPT:6
EXECUTE	BPT:6
Executing a Subprogram	BPT:169
EXIT IF	BPT:64
Exiting Edit Mode	BPT:14

EXP .....	BPT:82
Expressions, Evaluating .....	BPT:77
Extend char .....	BIT:118
Extend char key, HP 46020A .....	BUG:46
Extended Character Set .....	BPT:143
Extended character set, HP 46020A .....	BUG:46
External color displays .....	GPT:65
External devices	
Disc Drives .....	BPT:214
General .....	BIT:5, 23
Printers .....	BPT:257

## f

FHPIB BIN file .....	BUG:129
Field specifiers .....	BIT:42, 64
File	
Accessing .....	BIT:152
BPT:222	
ASCII .....	BIT:154, 157
BPT:206	
BDAT .....	BIT:153, 164
BPT:203	
Copying .....	BPT:38, 244
BUG:106, 149	
Data .....	BPT:318
Definition of BIN .....	BUG:30
Loading BIN .....	BUG:30
Names .....	BPT:28, 202
Opening .....	BPT:222
Plotting to .....	BPT:346
Program .....	BPT:318
Protecting .....	BPT:38, 242
Purging .....	BPT:38, 245
Renaming .....	BPT:38
Types .....	BPT:202
BUG:105, 106	
FILL .....	GPT:50, 56
FIND .....	BPT:21
Firmware .....	BIT:5, 16
Flexible discs (see Discs, flexible)	
Floor of a number .....	GPT:6
FN .....	BPT:168
FNEND .....	BPT:183
FOR NEXT .....	BPT:59
FORMAT OFF .....	BIT:139
FORMAT ON .....	BIT:137
Formatted Printing .....	BPT:259

FRACT .....	BPT:82
FRAME .....	BPT:333
Frame buffer .....	GPT:83
Free-field convention .....	BIT:35
Function or Subprogram .....	BPT:167
Functions	
Ending .....	BPT:183
String .....	BPT:125, 129
User-Defined .....	BPT:165

## g

GCLEAR statement .....	BUG:118
GDUs .....	BPT:333, GPT:8, 13, 19
GESCAPE .....	GPT:77, 88
GET .....	BPT:30
BUG:105, 151	
GINIT .....	BPT:332, 342, GPT:4
GLOAD .....	BPT:341
GOSUB .....	BPT:48
GOTO .....	BPT:48
GPIO	
BIN file .....	BUG:129
Byte mode .....	BIT:378
Configuration .....	BIT:364
Control lines .....	BIT:393
Data representations .....	BIT:378, 383
Description .....	BIT:364
ENTER .....	BIT:381
Example programs .....	BIT:389
Handshakes .....	BIT:366
Installation .....	BIT:363
Interrupts .....	BIT:386
ON INTR .....	BIT:386
OUTPUT .....	BIT:380
PSTS line .....	BIT:394
READIO and WRITEIO .....	BIT:397
Register summary .....	BIT:395
Reset .....	BIT:377
Service routines .....	BIT:387
Status lines .....	BIT:393
Timeouts .....	BIT:381
Word mode .....	BIT:380
GRAPH BIN file .....	BUG:112, 117, 130
Graphic Display Units .....	BPT:333, 336

BPT: *BASIC Programming Techniques*BIT: *BASIC Interfacing Techniques*GPT: *BASIC Graphics Programming Techniques*BUG: *BASIC User's Guide*

Graphic Units	BPT:336, 340
Graphics	BPT:331
Color	BPT:347
Initializing	BPT:332, 342
Interactive	BPT:354
Monitors	BPT:331
Output Devices	BPT:342
Saving an Image	BPT:341
Storing	BPT:351
Graphics input	GPT:79
GRAPHICS INPUT IS	GPT:80
GRAPHICS Key	BPT:331
GRAPHICS key, HP 98203B	BUG:69,116
GRAPHICS OFF	BPT:283, 331 BUG:116,117
GRAPHICS ON	BPT:331 GPT:4 BUG:116,118
Graphics/Dump Graphics key, HP 46020A	BUG:54,116
GRAPHX BIN file	BUG:130
GRID	BPT:336 GPT:28, 30, 33
GSTORE	BPT:341
GSTOREd image	GPT:64
Guide organization	BUG:2

# h

Halting Program Execution	BPT:46
Handshakes	
BCD	BIT:410
Datacomm	BIT:270, 274
GPIO	BIT:366
HP-IB	BIT:233
In general	BIT:17
Serial	BIT:328
Hard Clip Limits	BPT:338 GPT:8, 34
Hardware	BIT:5 BPT:382
Hardware priority	BIT:89
Hewlett-Packard Graphics Language	GPT:61, 67
Hierarchy	BPT:121
Arithmetic	BUG:93,141
Numeric Operating	BPT:77

Highlight Characters	BPT:143
Housekeeping	GPT:125
HP 46020A Keyboard	BUG:39,43
HP 46060A Mouse	BUG:40
HP 82901 Disc Drive	BUG:129
HP 82902 Disc Drive	BUG:129
HP 8290X Disc Drive	BUG:129
HP 9135 Disc Drive	BUG:129
HP 98203A Keyboard	BUG:39,75
HP 98203B Keyboard	BUG:39,61
HP 98255 EPROM interface	BUG:129
HP98259 Magnetic Memory interface	BUG:129
HP 98622 GPIO interface	BUG:129
HP 98623 BCD interface	BUG:129
HP 98624 HP-IB interface	BUG:129
HP 98625 High-speed Disc interface	BUG:129
HP 98626 Asynchronous Serial Interface	BUG:129
HP 98628 Datacomm interface	BUG:129
HP 98629 Shared Resource Management interface	BUG:129,131
HP 9885 Disc Drive	BUG:129
HP-IB	
ABORT statement	BIT:207
Active Controller	BIT:201
Advanced bus management	BIT:211
ATN	BIT:202, 234
Bus	BIT:197
Bus commands and codes	BIT:213
Bus lines	BIT:236
Bus messages	BIT:211
CLEAR statement	BIT:206
Commands	BIT:202
Control lines	BIT:233
Controller status and address	BIT:219
DAV	BIT:233
ENABLE INTR	BIT:207
EOI	BIT:234
Example bus sequences	BIT:202
General structure	BIT:201
Handshake lines	BIT:233
Handshakes	BIT:233
IFC	BIT:234
Interface	BIT:197
Interface status	BIT:229
Interrupt registers	BIT:222
Interrupts	BIT:207, 221
Listen addresses	BIT:214
Listener	BIT:201, 202

BPT: *BASIC Programming Techniques*BIT: *BASIC Interfacing Techniques*GPT: *BASIC Graphics Programming Techniques*BUG: *BASIC User's Guide*

LOCAL statement .....	<b>BIT:205</b>	I/O Path .....	<b>BPT:222</b>
Message mnemonics .....	<b>BIT:217</b>	Closing .....	<b>BPT:223</b>
Multiple listeners .....	<b>BIT:203</b>	Opening .....	<b>BPT:222</b>
NDAC .....	<b>BIT:233</b>	I/O Path Names	
NDAC holdoff .....	<b>BIT:232</b>	ASCII files .....	<b>BIT:154</b>
Non-Active Controllers .....	<b>BIT:219</b>	Assigning .....	<b>BIT:26</b>
NRFD .....	<b>BIT:233</b>	Attributes .....	<b>BIT:33, 137</b>
ON INTR .....	<b>BIT:207, 221</b>	BDAT files .....	<b>BIT:153</b>
Pass control command .....	<b>BIT:216, 220</b>	Benefits of using .....	<b>BIT:31</b>
PPOLL statement .....	<b>BIT:209</b>	Buffers .....	<b>BIT:169</b>
Primary address .....	<b>BIT:24, 199</b>	Closing .....	<b>BIT:28</b>
Register summary .....	<b>BIT:237</b>	Data type .....	<b>BIT:27</b>
REMOTE statement .....	<b>BIT:204</b>	Description .....	<b>BIT:25</b>
REN .....	<b>BIT:234</b>	In COM .....	<b>BIT:31</b>
Secondary addressing .....	<b>BIT:203</b>	Local .....	<b>BIT:29</b>
Secondary commands .....	<b>BIT:216, 222, 231</b>	Pass parameters .....	<b>BIT:30</b>
Sending data .....	<b>BIT:217</b>	Re-assigning .....	<b>BIT:28</b>
SPOLL statement .....	<b>BIT:210</b>	Register summary .....	<b>BIT:79</b>
SRQ .....	<b>BIT:234</b>	Table .....	<b>BIT:27, 76</b>
Statement summary .....	<b>BIT:204</b>	Identifiers .....	<b>BPT:317</b>
System controller .....	<b>BIT:201</b>	Identifying keyboard .....	<b>BUG:9,39</b>
Talk addresses .....	<b>BIT:214</b>	Identity Matrix .....	<b>BPT:107</b>
Talker .....	<b>BIT:201, 202</b>	IDN .....	<b>BPT:107</b>
TRIGGER statement .....	<b>BIT:206</b>	IDRAW .....	<b>BPT:334</b>
Unlisten .....	<b>BIT:202</b>	IF THEN .....	<b>BPT:51</b>
Unlisten command .....	<b>BIT:214</b>	IF THEN ELSE .....	<b>BPT:55</b>
Untalk command .....	<b>BIT:214</b>	Ill-Conditioned Matrices .....	<b>BPT:112</b>
HP9885 BIN file .....	<b>BUG:129</b>	IMAGE .....	<b>BPT:260</b>
HPGL .....	<b>BPT:345, GPT:61, 62, 67</b>	Image .....	<b>GPT:64</b>
HPGL plotter speeds .....	<b>GPT:130</b>	Image Specifiers, Numeric .....	<b>BPT:261</b>
HPIB BIN file .....	<b>BUG:32,129,132</b>	Image Specifiers, String .....	<b>BPT:262</b>
HSL color space .....	<b>GPT:104</b>	Images .....	<b>BPT:260</b>
HSL Model .....	<b>GPT:86</b>	Binary .....	<b>BIT:47, 69</b>
HSL Resolution .....	<b>GPT:87</b>	ENTER definitions .....	<b>BIT:64</b>
Human interface .....	<b>BUG:6</b>	Nested .....	<b>BIT:52, 72</b>
Hz setting, CRT .....	<b>BUG:10,11,144</b>	Numeric .....	<b>BIT:44, 66</b>
		OUTPUT definitions .....	<b>BIT:44</b>
		Re-use .....	<b>BIT:51, 72</b>
		Repeat factors .....	<b>BIT:50, 72</b>
		Special .....	<b>BIT:48, 68</b>
		Specifiers .....	<b>BIT:42, 64</b>
		String .....	<b>BIT:46, 67</b>
		Termination .....	<b>BIT:49, 71</b>
		IMOVE .....	<b>BPT:334, GPT:50</b>
		Implicit Dimensioning .....	<b>BPT:90</b>
		Incremental Moves .....	<b>BPT:334</b>
		Incremental plotting .....	<b>GPT:50</b>
		INDENT .....	<b>BPT:23</b>

## i

I/O	
Backplane .....	<b>BIT:6</b>
Buffers .....	<b>BIT:169</b>
Description .....	<b>BIT:6, 16</b>
Examples .....	<b>BIT:18</b>
Statements .....	<b>BIT:16</b>
String variables .....	<b>BIT:22, 155</b>

BPT: *BASIC Programming Techniques*BIT: *BASIC Interfacing Techniques*GPT: *BASIC Graphics Programming Techniques*BUG: *BASIC User's Guide*

Indenting a Program .....	BPT:23
INDEX Conversions .....	BIT:146
INITIALIZE statement .....	BUG:34,36,107,145,146
Initializing a Disc .....	BPT:208
Initializing flexible discs .....	BUG:33,145
Initializing Graphics .....	BPT:332, 342
INPUT Statement .....	BIT:122
Inputting	
Data .....	BIT:155
Multiple Fields .....	BPT:296
INS C key, HP 98203A .....	BUG:80
INS CHR key, HP 98203B .....	BUG:67
INS L key, HP 98203A .....	BUG:79
INS LN key, HP 98203B .....	BUG:67
Insert char key, HP 46020A .....	BUG:50
INSERT LINE Key .....	BPT:9
Insert line key, HP 46020A .....	BUG:50
Inserting	
3½-inch disc .....	BUG:17,18
5¼-inch disc .....	BUG:22
Lines .....	BPT:9
Subprograms .....	BPT:182
Installation, computer .....	BUG:1
INT .....	BPT:82
INTEGER .....	BPT:73
Numbers .....	BPT:204
Internal representation .....	BIT:13
Variables .....	BPT:321
With FORMAT OFF attribute .....	BIT:140
INTENSITY .....	GPT:86
Interactive Graphics .....	BPT:353
GPT:71	
Interface select code .....	BIT:23
Interface, human .....	BUG:6
Interfaces	
Concepts .....	BIT:5
Events .....	BIT:81
Function of .....	BIT:7
Interrupts .....	BIT:91
Overview .....	BIT:9
Select code table .....	BIT:23, 451
Timeouts .....	BIT:96
Interleave on Discs .....	BPT:200
INTERNAL .....	BPT:212
Internal	
Disc Drives .....	BPT:214
Format for files .....	BIT:140
Numeric Formats .....	BPT:75
	BIT:12, 13, 15

Interrupts	
BCD .....	BIT:427
Conditions .....	BIT:95
Datacomm .....	BIT:279
Enabling .....	BIT:91
GPIO .....	BIT:386
Hardware priority .....	BIT:87
HP-IB .....	BIT:221
HP-IB (Non-Active Controller) .....	BIT:221
HP-IB (registers) .....	BIT:222
HP-IB (SRQ) .....	BIT:207
Mask .....	BIT:92
Overview .....	BIT:91
Re-enabling .....	BIT:93
Software priority .....	BIT:84
Interval Timing .....	BPT:274
Introduction .....	BPT:1
INV .....	BPT:108
Inverse Matrix .....	BPT:107
IO BIN file .....	BUG:130
IPLOT .....	BPT:334, GPT:50, 56
Isotropic .....	GPT:5, 13
Scaling .....	GPT:5
View .....	BPT:340
Item separators .....	BIT:36, 56
Item terminators .....	BIT:36, 56
IVAL .....	BPT:82

## j

Jumper, CRT Hz .....	BUG:11
----------------------	--------

## k

Katakana characters .....	BIT:440
HP 46020A .....	BUG:46
KBD .....	BPT:39, 82, 256
KBD BIN file .....	BUG:72,85,131
KBD\$ function .....	BIT:130
Key sequences, non-ASCII .....	BIT:124, 446
Keyboard	
Auto-repeat .....	BIT:121
Buffer size .....	BIT:130
CAPS LOCK mode .....	BIT:120
Closure keys .....	BIT:126
Control characters .....	BIT:119

Description	BIT:117	Lexical Order	BPT:139
Disabling	BIT:132	Predefined	BPT:145
Display area	BUG:40,41	User-Defined	BPT:156
Enhanced control	BIT:130	LEXICAL ORDER IS	BPT:130, 139
ENTER	BIT:122	Lexical Tables	BPT:146
Error messages	BUG:96	LEX_AID	BPT:158
Functional key groups	BIT:118	LGT	BPT:82
identification	BUG:9,39	LIF ASCII files	BIT:154
Input	BPT:292	Line Rotation	BPT:335
Key sequences tables	BIT:446	LINE TYPE	BPT:337
Knob	BIT:129, 132		GPT:38, 39
Lock out	BIT:132, 134	Linear Program Flow	BPT:45, 46
OUTPUT	BIT:124	LINPUT	BPT:296
PRINTALL mode	BIT:120	LIST BIN statement	BUG:132,142
Register summary	BIT:135	LIST KEY	BPT:41
Simulated EOI	BIT:123	LIST statement	BUG:89,90,111,151
Trapping keystrokes	BIT:130		BPT:11
Trapping softkeys and KNOB	BIT:132		
Keyboards	BPT:8	Listing	
Keys, special	BUG:9	BIN files	BUG:142
Keyword	BPT:5	Disc's directory	BUG:104,105,146
	BUG:1	Program	BPT:11
Knob applications	BIT:129		BUG:151
Knob, Using	BPT:68	SRM directory	BUG:106
KNOBX function	BIT:128,129	Live Keyboard	BPT:16, 308
	BPT:69	LOAD	BPT:28, 34
KNOBY function	BIT:128,129		BUG:90,105,111,113,115,117,123,124,151
	BPT:69, 380	LOAD BIN statement	
			BUG:105,133,134,142
		LOAD KEY	BPT:41
		Loading	
		BASIC	BUG:5
		BIN files	BUG:30,142
		BINs	BPT:37
		Program	BUG:90,151
		Softkeys	BPT:41
		Subprograms	BPT:23, 180
		LOADSUB	BPT:23, 180
		LOADSUB ALL FROM	BIT:165
		LOG	BPT:83
		Logic levels	BIT:11
		Logical Comparisons	BPT:326
		LOOP	BPT:59, 63
		Loop Counter	BPT:60
		Loops	BPT:322
		LORG	BPT:337
			GPT:20, 21, 22, 23
		LWC\$	BPT:130

## 1

LABEL	BPT:337
	GPT:9, 16, 23
Label Location	BPT:337
Labeling a PLOT	GPT:9
Labels, Disc	BPT:209
Language extensions	BUG:30
Language extensions BIN files.	BUG:130,133
Language, machine	BUG:7
Later boot ROMs.	BUG:7,135,143
LDIR	BPT:337,
	GPT:21, 22, 23
LEN	BPT:125
Length of a String	BPT:119, 125
Length, Header of BDAT-file strings.	BIT:140
LEX BIN file	BUG:131

# m

Machine language	BUG:7
Main Program	BPT:5
Major tick count	GPT:31
Major tick lines	GPT:32
Manual Examples disc	GPT:1
Manual shutter, 3½-inch disc	BUG:17
Manual, Overview	BIT:1
Mapped	GPT:13
Mapping	BPT:356
Mass Memory Performance	BPT:318
Mass Storage	BPT:198
As an I/O resource	BIT:21
File access	BIT:152, 157, 164
Non-Disc	BPT:220
Mass Storage Access	BPT:210
MASS STORAGE IS statement	BPT:214
BUG:107,113,115,149	
Mass Storage Unit Specifier (see msus)	
MAT	BPT:93
MAT BIN file	BUG:131
MAT Functions	BPT:132
MAT REORDER	BPT:99
GPT:97	
MAT SORT	BPT:100
Math Hierarchy	BPT:77
Mathematical Operations	BPT:321
Matrix	BPT:103
Determinant	BPT:111
Identity	BPT:107
Ill-Conditioned	BPT:112
Inverse	BPT:107
Multiplication	BPT:103
Singular	BPT:110
Summing Columns	BPT:116
Summing Rows	BPT:116
Transposition	BPT:115
MAX	BPT:83
MAXREAL	BPT:83
Mechanical drawing display	BUG:123
Media Specifiers	BPT:211
MEMORY	BPT:212
Memory	
Clearing	BUG:151
Insufficient	BUG:27,29
Saving	BPT:329
Menu key, HP 46020A	BUG:55,56,153

Menus	BPT:285
Merging Subprograms	BPT:182
Message/results line, display	BUG:40,41
Micro-discs	BUG:14
MIN	BPT:83
Mini-discs	BUG:19
Minor tick count	GPT:31
Minor tick crosses	GPT:32
Minor ticks	GPT:32
MINREAL	BPT:83
Mixed color modes	GPT:73
Mixing colors	GPT:95
Monadic Operators	BPT:79
Monochrome echoes	GPT:76
Mouse	BUG:40
MOVE	BPT:332
	GPT:9, 23, 47, 50
MOVE_LINES	BPT:20
Moving	
Data Pointer	BPT:197
EOF Pointers	BPT:228
Pen	BPT:332
Program Segments	BPT:20
MS BIN file	BUG:131
MSI statement	BUG:107,108,149
MSUS	BPT:27, 211
	BUG:26,100,101,102,103,107,108,149
msus, default	BUG:149
Multiple Fields Input	BPT:296
Multiple-systems booting	BUG:27

# n

Names	
I/O path	BIT:26
Naming Files	BPT:28
Naming Subprograms	BPT:165
Nesting Structures	BPT:54
Next key, HP 46020A	BUG:48
Non-Active Controller	BIT:219
Non-ASCII key sequences	BIT:124, 453
Non-ASCII Keys	BPT:284, 393
Non-ASCII Keystrokes	BPT:40
Non-color mapped color	GPT:81
Non-Disc Mass Storage	BPT:220
Non-separable degrees of freedom	GPT:73

NPAR .....	BPT:172
Number Base Conversion .....	BPT:138
Number builder .....	BIT:56
Numbers, Comparing .....	BPT:301
Numeric	
Accuracy .....	BPT:76
Computation .....	BPT:73
Data Types .....	BPT:73
Formats, Internal .....	BPT:75
Functions .....	BPT:82
Image Specifiers .....	BPT:261
Precision .....	BPT:76
Numeric to String Conversion .....	BPT:127

## O

OFF KBD .....	BIT:130
OFF-event .....	BPT:70
ON CYCLE .....	BPT:66, 276
ON DELAY .....	BPT:66, 276
ON END .....	BPT:66, 240
ON EOR .....	BPT:66
ON EOT .....	BPT:66
ON ERROR .....	BIT:330
	BPT:66, 302, 303
ON INTR .....	BPT:66
BCD .....	BIT:427
Datacomm .....	BIT:279
GPIO .....	BIT:386
HP-IB .....	BIT:207, 221
Powerfail .....	BIT:350
ON KBD .....	BIT:130
	BPT:66
ON KEY .....	BIT:82
	BPT:66, 67
ON KNOB .....	BIT:128, 132
	BPT:66, 68
ON SIGNAL .....	BPT:66
ON Statement .....	BPT:57
ON TIME .....	BPT:66, 276
ON TIMEOUT .....	BPT:66
ON-event .....	BPT:66
One-system booting .....	BUG:25
Opening a File .....	BPT:222
Opening an I/O Path .....	BPT:222
Operator Errors .....	BPT:300
Operator Hierarchy .....	BPT:77

Operators .....	BPT:79
Comparision .....	BPT:79
Dyadic .....	BPT:79
Monadic .....	BPT:79
OPTION BASE .....	BPT:86
Optional Parameters .....	BPT:171
Organization, guide .....	BUG:2
OUTPUT .....	BPT:229, 230
ASCII files .....	BIT:154, 157
BCD .....	BIT:407, 423
BDAT files .....	BIT:153
Buffers .....	BIT:174, 182, 185, 188
CRT .....	BIT:99
Datacomm .....	BIT:263
Example statement .....	BIT:18
Free-field .....	BIT:35
GPIO .....	BIT:380
HP-IB .....	BIT:200, 202, 215
Keyboard .....	BIT:124
Serial .....	BIT:328
Source items .....	BIT:18
String variables .....	BIT:22, 155
Using images .....	BIT:42
Output area, display .....	BUG:40, 41
OUTPUT KBD .....	BPT:283
Outputting data .....	BIT:35
Overhead .....	BPT:315

## p

PAIRS conversions .....	BIT:147
Palette .....	GPT:85
Parameters .....	BPT:170
Parameters, Optional .....	BPT:171
PARITY attribute .....	BIT:149
PAUSE .....	BPT:47
PAUSE Key .....	BPT:17
PAUSE key, HP 98203B .....	BUG:73
Pausing a Program .....	BPT:17
Pausing system program search .....	BUG:11
PDEV .....	BPT:20
PDEV BIN file .....	BUG:131
PDIR .....	GPT:47, 52
PEN .....	BPT:332
	GPT:81
Pen Control .....	BPT:334
Pen control parameter .....	GPT:43, 44

BPT: *BASIC Programming Techniques*BIT: *BASIC Interfacing Techniques*GPT: *BASIC Graphics Programming Techniques*BUG: *BASIC User's Guide*

PEN number.....	GPT:35
Pen, Moving.....	BPT:332
Pen, Moving Incremental.....	BPT:334
Performance.....	BPT:318
Peripherals.....	BUG:99
Photographing CRTs.....	GPT:107
PHYREC.....	BPT:379, 381
PI.....	BPT:83
PIVOT.....	BPT:335
	GPT:47, 52, 55
Pixel.....	GPT:46
Pixels.....	GPT:39
PLOT.....	BPT:332
	GPT:4, 9
PLOTTER IS.....	BPT:342
	GPT:61
PLOTTER IS file.....	BPT:346
Plotting contours.....	GPT:116
Plotting surfaces.....	GPT:116, 120
Plotting to a File.....	BPT:346
POLYGON.....	GPT:52
POLYLINE.....	GPT:52, 55
Polynomial Evaluations.....	BPT:325
POS.....	BPT:125
Position of a Substring.....	BPT:125
Powerfail.....	BPT:275
Clock.....	BIT:349
Continuous memory.....	BIT:349
Interrupts.....	BIT:350
Overview.....	BIT:348
Register summary.....	BIT:359
Service routines.....	BIT:353
Timers.....	BIT:349
Precision.....	BPT:76
Prerun.....	BPT:15
Prev key, HP 46020A.....	BUG:48
Primary Address.....	BPT:254
	BIT:24, 199
Primary colors.....	GPT:84
PRINT.....	BPT:259
	BUG:57, 71, 83, 109, 110
Print All softkey, HP 46020A.....	BUG:57
Print key, HP 46020A.....	BUG:46
PRINT USING.....	BPT:260
PRINTALL IS.....	BPT:256, 313
	BUG:110
Printall printer.....	BUG:110
Printer.....	BUG:108, 150
Default.....	BUG:150
Dumping to a.....	BUG:112
PRINTER IS statement.....	BUG:109, 110, 111, 115, 150
	BPT:254
Printer Switch Setting.....	BPT:254
Printers.....	BPT:253
Control Characters.....	BPT:257
Escape Codes.....	BPT:258
External.....	BPT:257
Printing, Formatted.....	BPT:259
Priority.....	BIT:84
Problems/solutions.....	BUG:26, 27, 29
PROG Files.....	BPT:28
	BUG:105, 136, 152
Program.....	
Counter.....	BPT:45
Efficiency.....	GPT:128
Execution.....	BPT:15, 310
Execution, Selection.....	BPT:51
Files.....	BPT:318
Program Flow.....	
Linear.....	BPT:45
Repetition.....	BPT:45
Selection.....	BPT:45
Sequence.....	BPT:45
Program Line.....	BPT:5
Programming.....	BUG:87
Programming a LOAD.....	BPT:35
Programming GET.....	BPT:31
Programs.....	
Editing.....	BUG:89, 151
Errors.....	BUG:97
Listing.....	BUG:89, 151
Loading.....	BUG:90, 151
Recording.....	BPT:28
Replacing.....	BPT:29
Retrieving.....	BPT:27, 30
Running.....	BUG:88, 152
Search.....	BUG:11
Storing.....	BPT:27
	BUG:89, 152
System.....	BUG:5
Variables.....	BUG:126
Writing.....	BUG:87
Prompts.....	BPT:282
PROTECT.....	BPT:38, 242
Protecting Files.....	BPT:38, 242
PROUND.....	BPT:83, 84
PRT.....	BPT:83, 256
PRT ALL key, HP 98203A.....	BUG:76, 83
PRT ALL key, HP 98203B.....	BUG:71
PSE key, HP 98203A.....	BUG:83

PURGE	BPT:38, 245
Purging Files	BPT:38, 245
Purpose of manual	BIT:1

## q

Quantizable degrees of freedom	GPT:73
--------------------------------	--------

## r

Radians	BPT:83
RAM Volumes	BPT:220
Random ENTER	BPT:238
Random Numbers	BPT:84
Random OUTPUT	BPT:234
Range, computing	BUG:95
RANK	BPT:83
RATIO	BPT:336
	GPT:14, 79
RCL key, HP 98203A	BUG:79
RE-SAVE	BPT:29
RE-STORE	BPT:29
RE-STORE BIN	BPT:381
RE-STORE KEY	BPT:41
READ	BPT:92, 194
READ LOCATOR	BPT:358
	GPT:74
Reading	
BDAT Files	BPT:225
Data From BDAT Files	BPT:237
Directories	BPT:246
REAL	BPT:73
FORMAT OFF representation	BIT:140
Internal representation	BIT:15
Number Comparisons	BPT:301
Real Numbers	BPT:204, 324
Real-Time Clock	BPT:265
Recall key, HP 46020A	BUG:53
RECALL key, HP 98203B	BUG:66
Recall softkey, HP 46020A	BUG:58
Recalling Lines	BPT:10
Record Lengths	BPT:226
Recording a Program	BPT:28
RECOVER	BPT:176
RECTANGLE	GPT:56

Rectangles	GPT:56
Recursion	BPT:184
REDIM	BPT:95
Redimensioning Arrays, Automatic	BPT:93
Redimensioning Arrays, Explicit	BPT:95
Register summary	
BCD	BIT:428
Buffers	BIT:195
CRT	BIT:115
Datacomm	BIT:310
GPIO	BIT:395
HP-IB	BIT:237
I/O path	BIT:79
Keyboard	BIT:135
Powerfail	BIT:359
Serial	BIT:343
Registers	
Access	BIT:73
CONTROL	BIT:75
Description	BIT:16
I/O path	BIT:76
Interface	BIT:74
READIO	BIT:79
STATUS	BIT:74
WRITEIO	BIT:79
Relational Operations	BPT:121
Relative Moves	BPT:335
REM	BPT:12
REMOTE	BPT:212
Removing 3½-inch disc	BUG:18
Removing 5¼-inch disc	BUG:22
REN Command	BPT:10
RENAME	BPT:38
Renaming a File	BPT:38
Renumbering a Program	BPT:10
Reordering Arrays	BPT:99, 135
REPEAT UNTIL	BPT:59, 61
Repeating a String	BPT:129
Repetition	BPT:59
Replacing Programs	BPT:29
Requesting Service	BIT:226
RES	BPT:83
RESET Key	BPT:17
Reset key	BUG:10
Reset key, HP 46020A	BUG:52
RESET key, HP 98203B	BUG:73

Reset	
BCD	BIT:412
Buffers	BIT:179
Datacomm	BIT:266
GPIO	BIT:377
HP-IB	BIT:237
Interface table	BIT:463
Master table	BIT:459
Serial	BIT:326, 343
Resource	
I/O, definition of	BIT:5
Specifying	BIT:16, 22
Resources	BPT:315
RESTORE	BPT:197
Result key, HP 46020A	BUG:54
RESULT key, HP 98203B	BUG:71
Retrieving Programs	BPT:27, 30
RETURN	BPT:48
Return	BIT:118,122,123
RETURN attribute	BIT:151
Return key, HP 46020A	BUG:45
Returning from a Subprogram	BPT:49
REV\$	BPT:129
Reversing a String	BPT:129
RGB color cube	GPT:102
RGB Model	GPT:86
RND	BPT:83, 84
ROM, boot	BUG:7
Roman characters, HP 46020A	BUG:46
ROMs, earlier boot	BUG:7,8,135,143
ROMs, later boot	BUG:7,135,143
Rotary pulse generator	BIT:129
ROTATE	BPT:83
Rotating Lines	BPT:335
Rounding	BPT:84
	BUG:95
Rounding Numbers	BPT:81
RPLOT	BPT:335
	GPT:47, 48, 55, 56
RPT\$	BPT:129
RS-232C	
Interface	BIT:321
Interface cable	BIT:306, 337, 338
List of signals	BIT:308, 341
With datacomm	BIT:257
RST key, HP 98203A	BUG:82
RSUM	BPT:116
RUN	BPT:15
Run indicator	BUG:40,43

RUN key, HP 98203A	BUG:83
RUN key, HP 98203B	BUG:73
Run Light	BPT:17
RUN softkey, HP 46020A	BUG:56
RUN statement	BUG:152
Run-time	BPT:16
Running a Program	BPT:15
	BUG:88,152

## S

SAVE statement	BPT:28
	BUG:105,152
Saving an Image	BPT:341
Saving Memory	BPT:329
Saving Time	BPT:327
SC	BPT:83
Scalar Expressions	BPT:77
Scaling	GPT:5
SCRATCH	BPT:43
	BUG:44,61,75,87,90,125,151
SCRATCH A	BIT:113
	BPT:43
SCRATCH BIN	BPT:43
	BUG:132,135,142
SCRATCH C	BPT:43
SCRATCH KEY	BPT:43
Scratching BINs	BPT:37
Screen Width	BPT:282
	BIT:108
Search and Replace	BPT:21
Search, pausing system program	BUG:11
Searching for Strings	BPT:136
SECURE	BPT:243
Securing Program Lines	BPT:243
Seeing color	GPT:94
SELECT	BPT:56
SELECT CASE	BPT:57
Select code table	BIT:23, 435
Select key, HP 46020A	BUG:47
Selecting	
Character sets	GPT:68
Line types	GPT:38
Plotter	GPT:61
Self-test error	BUG:11
Separable degrees of freedom	GPT:73

Serial	
Async	BIT:321
Baud rates	BIT:325
Character format	BIT:327
Character frame	BIT:322
Defaults	BIT:325
ENTER	BIT:328 BPT:237
Error detection	BIT:329
Error recovery	BIT:330
Handshakes	BIT:328
Modem handshake	BIT:328
Modem-line switches	BIT:325
OUTPUT	BPT:229, BIT:328
Overview	BIT:324
Parity bit	BIT:322, 327
READIO and WRITEIO	BIT:332
Register summary	BIT:343
Reset	BIT:326
Self-test	BIT:332
Signal functions	BIT:337
Special messages	BIT:331
Start bit	BIT:321, 327
Stop bit	BIT:322, 327
UART	BIT:322
SERIAL BIN file	BUG:129
Service routines	
BCD	BIT:427
Datacomm	BIT:281
Example	BIT:82
GPIO	BIT:387
HP-IB	BIT:208, 221, 231
Interrupts	BIT:91
Logging	BIT:84, 89
Powerfail	BIT:353
Serial	BIT:329
Set-up	BIT:82, 91
Software priority	BIT:84
System priority	BIT:86
SET ECHO	BPT:358, GPT:74, 75
SET PEN	GPT:86, 87, 97
SET T key, HP 98203A	BUG:80
SET TAB key, HP 98203B	BUG:68
Set Tab softkey, HP 46020A	BUG:57
SET TIME	BPT:268
SET TIMEDATE	BPT:266
Setting the Clock	BPT:268, 270
Setting, CRT Hz	BUG:10
SGN	BPT:83
Shared Resource Management (see SRM)	
SHIFT	BPT:83
Shift key, HP 46020A	BUG:45
SHIFT key, HP 98203A	BUG:76
SHIFT key, HP 98203B	BUG:62
SHOW	BPT:340, GPT:5
Shutter, 3½-inch disc	BUG:17
Shuttle display	BUG:124
Significant digits	BUG:95
Simple Branching	BPT:48
SIN	BPT:83
Single Byte Access	BPT:239
Single degree of freedom	GPT:72
Single-Subscripted Substrings	BPT:122
Singular Matrices	BPT:110
SIZE	BPT:83, 91
Soft clip area	GPT:8
Soft Clip Limits	BPT:338 GPT:8, 34
Softkey	
Interrupts	BIT:84
Labels	BIT:114
Sensing with ON KNOB	BIT:132
Softkey labels, display	BUG:40, 42
Softkeys	BPT:127, 132 BIT:39, 285
Defining	BPT:42
Definitions	BPT:39, 41
Deleting from Memory	BPT:43
Editing	BPT:39
Files	BPT:41
HP 46020A	BUG:55, 153
HP 98203A	BUG:85
HP 98203B	BUG:72
Listing	BPT:41
Loading	BPT:41
Software	BIT:5
Software priority	BIT:84
Solving Simultaneous Equations	BPT:108
Sorting	
Arrays	BPT:100
by a Vector	BPT:134
by Substrings	BPT:133
Strings	BPT:131
Source	BIT:6
Source msus	BUG:35

BPT: *BASIC Programming Techniques*BIT: *BASIC Interfacing Techniques*GPT: *BASIC Graphics Programming Techniques*BUG: *BASIC User's Guide*

Special keys .....	<b>BUG:9</b>	
SQR .....	<b>BPT:83</b>	
SRM		
Autostart .....	<b>BPT:36</b>	
BIN file .....	<b>BUG:129,131</b>	
Display .....	<b>BUG:117</b>	
Files .....	<b>BUG:106</b>	
Listing a directory .....	<b>BUG:117</b>	
SRQ interrupts .....	<b>BIT:207</b>	
Standard numeric format .....	<b>BIT:36</b>	
Standard string format .....	<b>BIT:36</b>	
Statement .....	<b>BPT:5</b>	
Statements, New .....	<b>BPT:380</b>	
STATUS statement .....	<b>BIT:74</b>	
STEP Key .....	<b>BPT:310</b>	
STEP key, HP 98203A .....	<b>BUG:82</b>	
STEP key, HP 98203B .....	<b>BUG:70</b>	
Step softkey, HP 46020A .....	<b>BUG:56</b>	
Stepping .....	<b>BPT:310</b>	
Stepwise refinement .....	<b>BIT:163</b>	
STOP .....	<b>BPT:46</b>	
STOP Key .....	<b>BPT:17</b>	
Stop key, HP 46020A .....	<b>BUG:52</b>	
STOP key, HP 98203A .....	<b>BUG:84</b>	
STOP key, HP 98203B .....	<b>BUG:73</b>	
Stopping a Program .....	<b>BPT:17</b>	
STORE KEY .....	<b>BPT:41</b>	
STORE statement .....	<b>BPT:28</b> <b>BUG:89,105,136,137,142,152,153</b>	
STORE SYSTEM statement .....	<b>BPT:37, 379</b> <b>BUG:134,153</b>	
Storing		
Data .....	<b>BPT:194</b>	
Data in Variables .....	<b>BPT:194</b>	
Discs .....	<b>BUG:37</b>	
Graphics .....	<b>BPT:351</b>	
Programs .....	<b>BPT:27</b> <b>BUG:89,152</b>	
Strings .....	<b>BPT:120</b>	
Systems .....	<b>BPT:37</b>	
String to Numeric Conversion .....	<b>BPT:126</b>	
String variables		
Buffers .....	<b>BIT:169</b>	
I/O .....	<b>BIT:22, 155</b>	
Strings .....	<b>BPT:80, 119</b>	
Arrays .....	<b>BPT:120</b>	
Concatenation .....	<b>BPT:121</b>	
Default Dimensioning .....	<b>BPT:119</b>	
Evaluation Hierarchy .....	<b>BPT:121</b>	
Functions .....	<b>BPT:125, 129</b>	
Image Specifiers .....	<b>BPT:262</b>	
Length .....	<b>BPT:119, 125</b>	
Relational Operations .....	<b>BPT:121</b>	
Repeat .....	<b>BPT:129</b>	
Reverse .....	<b>BPT:129</b>	
Sorting .....	<b>BPT:131</b>	
Storing .....	<b>BPT:120</b>	
Trimming .....	<b>BPT:129</b>	
Stubbing subprograms .....	<b>BIT:163</b>	
SUBEND .....	<b>BPT:183</b>	
Subprogram or Function .....	<b>BPT:167</b>	
Subprograms .....	<b>BIT:163</b> <b>BPT:5</b>	
Calling .....	<b>BPT:169</b>	
Deleting .....	<b>BPT:181</b>	
Editing .....	<b>BPT:182</b>	
Ending .....	<b>BPT:183</b>	
Executing .....	<b>BPT:169</b>	
Inserting .....	<b>BPT:182</b>	
Libraries .....	<b>BPT:23, 180</b>	
Loading .....	<b>BPT:180</b>	
Merging .....	<b>BPT:182</b>	
Naming .....	<b>BPT:165</b>	
RECOVER .....	<b>BPT:177</b>	
Returning from .....	<b>BPT:49</b>	
Softkeys .....	<b>BPT:177</b>	
Speed .....	<b>BPT:178</b>	
User-Defined .....	<b>BPT:165</b>	
Variables .....	<b>BPT:177</b>	
Substrings .....	<b>BPT:122</b>	
Double Subscripts .....	<b>BPT:123</b>	
Position .....	<b>BPT:125</b>	
Single Subscripts .....	<b>BPT:122</b>	
Sorting .....	<b>BPT:133</b>	
Subtractive color system .....	<b>GPT:102</b>	
SUM .....	<b>BPT:83, 94</b>	
Summing Columns in Arrays .....	<b>BPT:116</b>	
Summing Rows in Arrays .....	<b>BPT:116</b>	
Suppressing a Catalog Header .....	<b>BPT:250</b>	
Surface plotting .....	<b>GPT:116, 120</b>	
Switch, CRT Hz .....	<b>BUG:11</b>	
Switching Context .....	<b>BPT:176</b>	
SYMBOL .....	<b>GPT:56, 57</b>	
Symbol coordinate system .....	<b>GPT:19, 57</b>	
Symbol Table .....	<b>BPT:315</b>	
Syntax .....	<b>BPT:9</b>	
Syntax Checking .....	<b>BPT:9</b>	
SYS system file prefix .....	<b>BUG:135,153</b>	

SYSTEM	BIT:97,113
System Configuration	BPT:37
	BUG:134
System Controller	BIT:201
System key, HP 46020A	BUG:55,56,153
System priority	BIT:86
System program	BUG:5,39
System program search	BUG:11
System softkeys, HP 46020A	BUG:56
SYSTEM\$("CRT ID") statement	BUG:119,144,148
SYSTEM\$("LEXICAL ORDER IS")	BPT:145
SYSTEMS\$("KEYBOARD LANGUAGE")	BPT:145
Systems, Storing	BPT:37
SYSTEM_ system file prefix	BUG:135,153
SYSTEM_BA3	BUG:127,129,135
SYSTM files	BUG:106,135

## t

TAB	BPT:259
Tab key, HP 46020A	BUG:47
TAB key, HP 98203A	BUG:77
TAB key, HP 98203B	BUG:63
TABXY	BPT:259
TAN	BPT:83
Temperature specs, flexible disc	BUG:15,20
Tick marks	GPT:11
Time	BPT:265
TIME	BPT:83, 266
TIME\$	BPT:265
Time, Saving	BPT:329
TIMEDATE	BPT:265
Timeouts	
BCD	BIT:425
Datacomm	BIT:269
GPIO	BIT:381
Limitations	BIT:96
Set-up	BIT:96
Timing Interval	BPT:274
Token Table	BPT:315
Top-down design	BIT:161
TRACE ALL	BPT:311

TRACE OFF	BPT:313
TRACE PAUSE	BPT:313
Tracing	BPT:311
TRACK IS ON	BPT:357
TRACK ON	GPT:74
Tracking	BPT:357
TRANS BIN file	BUG:131
Transfer	
Attributes	BIT:192
Choosing parameters	BIT:175
Concurrency	BIT:184
Considerations	BIT:184
Error reporting	BIT:186
Examples	BIT:181
Initiating	BIT:174
Interactions with interrupts	BIT:190
Introduction	BIT:167
Method	BIT:189
ON EOR	BIT:178
ON EOT	BIT:178
Performance	BIT:187
Rates	BIT:189
Restrictions	BIT:190
Statement	BIT:172
Suspension	BIT:186
Termination	BIT:179
Types of	BIT:173
WAIT FOR EOR	BIT:179
WAIT FOR EOT	BIT:179
Transformations	GPT:112, 113, 114, 115
Transporting Programs	BPT:379
Transposing Matrices	BPT:115
Trapping	
Errors	BPT:302
Keys	BIT:130
Knob	BIT:129
TRIM\$	BPT:129
Trimming a String	BPT:129
Truncating	BUG:95
Two's-complement	BIT:13
Type Conversion	BPT:324
Type of resource	BIT:21
Types of files	BIT:152
Typing Aids	BPT:39

BPT: *BASIC Programming Techniques*BIT: *BASIC Interfacing Techniques*GPT: *BASIC Graphics Programming Techniques*BUG: *BASIC User's Guide*

**U**

UDUs.....	BPT:340
	GPT:8, 13
Underlining .....	BIT:104
Unified I/O	
Applications of.....	BIT:155
Description of.....	BIT:137,152
Unit Number.....	BPT:213
Unit number .....	BUG:101
UNTIL.....	BPT:61
UPC\$.....	BPT:130
Upgrading .....	BUG:137
Upgrading BASIC Programs.....	BPT:379
Upper and Lower Case.....	BPT:130
Uppercase and Lowercase .....	BPT:9
USER 1 .....	BIT:97
USER 2 .....	BIT:97
USER 3 .....	BIT:97
User Defined Units.....	BPT:340
User key, HP 46020A.....	BUG:55,56,153
User-Defined	
Functions.....	BPT:165
Lexical Order .....	BIT:156
Subprograms .....	BPT:165
Utility routines .....	GPT:123

**W**

WAIT.....	BPT:47
WHILE .....	BPT:59, 62
Wide pens.....	GPT:124
WINDOW .....	BPT:340, GPT:8, 17
WORD Attribute .....	BIT:142
Word, definition of .....	BIT:11
White-protecting flexible discs .....	BUG:23,24, 146,147
Writing	
Data.....	BPT:229
Programs .....	BUG:87
to BDAT Files.....	BPT:225 BIT:153, 164

**X**

XREF .....	BPT:20, 26
XREF BIN file .....	BUG:131

**V**

VAL.....	BPT:126
VAL\$.....	BPT:127
Variables .....	BPT:317
Declaring.....	BPT:74
Program.....	BUG:126
VIEWPORT .....	BPT:341
	GPT:8, 14, 15, 29
Volume Label.....	BPT:201
Volume Number .....	BPT:213
Volumes, Copying.....	BPT:244

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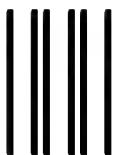
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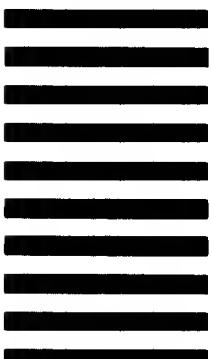
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